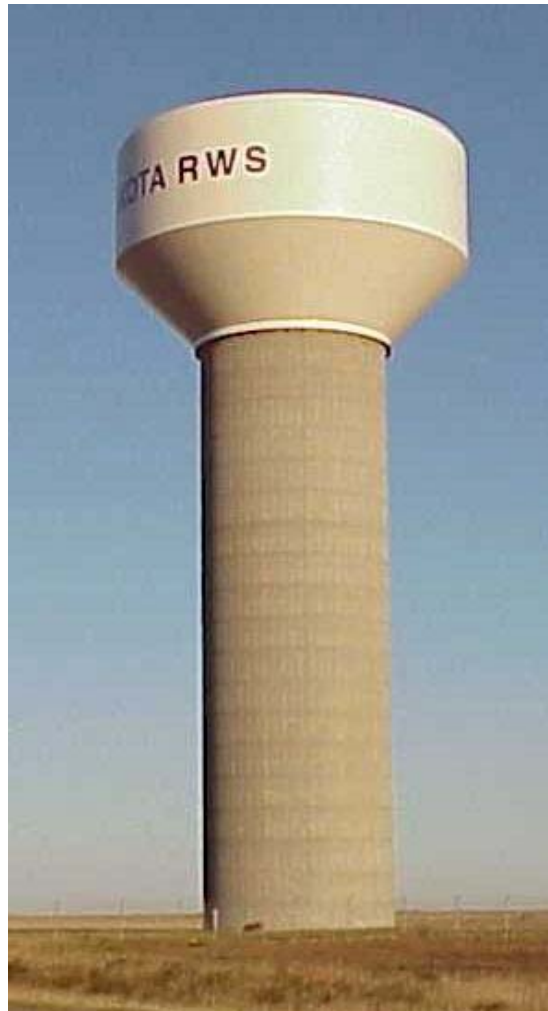


# Public Notification Handbook



## DRINKING WATER PROGRAM

Department of Environment and Natural Resources  
Foss Building - Lower Level  
523 East Capitol Ave.  
Pierre, SD 57501-3181

Phone: (605) 773-3754

## Public Notification Handbook

The purpose of this handbook is to explain EPA's revised public notification rule and provide specific examples of public notices. In addition to increasing the effectiveness of public notices, this handbook should make it easier for public water system owners and operators to comply with State and Federal requirements. Public notification of drinking water violations and other situations provides a means to protect public health, build trust with consumers through open and honest sharing of information, and establish an ongoing, positive relationship with the community. Public notice can also help consumers understand rate increases and support increased funding for drinking water treatment and protection.

If your water system serves at least 15 service connections or 25 people daily for at least 60 days out of the year, it is a **public water system** (PWS) and public notification will be required for violations of the State Drinking Water Standards. In South Dakota, the Department of Environment and Natural Resources (DENR) regulates drinking water systems through the Drinking Water Program (DWP). Specific requirements will differ somewhat depending on whether your system is a community public water system or a non-community public water system.

Public notification helps to ensure that consumers will always know if there is a problem with their drinking water. These notices immediately alert consumers if there is a serious problem with their drinking water (e.g., a boil water emergency). For less serious problems (e.g., a missed water test), water suppliers must notify consumers in a timely manner. Public notice requirements have always been a part of the Safe Drinking Water Act. EPA recently changed these requirements to make them even more effective.

### Changes in the Public Notice Requirements

On May 4, 2000, the Public Notification Rule had several modifications made to it in response to the 1996 Safe Drinking Water Act Reauthorization with the new requirements effective on May 6, 2002.

- Depending on the severity of the situation, water suppliers now have from 24 hours to one year to notify their customers after a violation occurs; however, it is always best to issue your public notice as soon as possible after a violation occurs.
- EPA/DENR specify three tiers of public notification. Depending on what tier a violation situation falls into, water systems have different amounts of time to distribute the notice and different ways to deliver the notice.
- Mandatory health effects language has been changed for each violation.
- For a Tier 1 violation, you must consult with the DENR within 24 hours for further public notice instructions.
- A "Certificate of Distribution" must be submitted to DENR along with a copy of each public notice within ten days of issuance.

## **Tier 1 (Immediate Notice, Within 24 Hours)**

**Notice must be issued as soon as practical but must be within 24 hours via radio, TV, direct home delivery, hand delivery, or posting at conspicuous locations throughout system.** Radio and TV notices must aired a minimum of three times during a 24-hour period. Postings must remain in place at least seven days or until the violation is resolved. The following are Tier 1 violations-

- Acute fecal coliform violations
- Nitrate, nitrite, or total nitrate/nitrite maximum contaminant level (MCL) violations
- Chlorine dioxide maximum residual detection level (MRDL) violation in distribution system
- Failure to take MRDL samples in distribution system when required
- Exceedance of maximum allowable turbidity level (if elevated to Tier 1 by the Drinking Water Program)
- Special notice for non-community water systems (NCWSs) with a nitrate level between 10 mg/L and 20 mg/L, where the system is allowed to exceed 10 mg/L by the Drinking Water Program
- Waterborne disease outbreak or other waterborne emergency
- Other violations or situations determined by the Drinking Water Program

**PWSs must also initiate consultation with the Drinking Water Program within 24 hours.** The Drinking Water Program may establish additional PN requirements during consultation.

## **Tier 2 (Notice as Soon as Possible, Within 30 Days)**

**Notice must be issued as soon as practical but must be within 30 days via mail, direct home delivery, hand delivery or posting at conspicuous locations throughout system.** Repeat notice every three months until violation is resolved. All PWSs must use additional delivery methods reasonably calculated to reach other consumers not notified by mail or direct home delivery. The following are Tier 2 violations-

- All MCL, MRDL, and treatment technique violations including-
  - Total coliforms
  - Turbidity\*
  - Radium 226/228
  - Gross alpha
  - Fluoride
- Monitoring violations
  - Microbiological repeat samples
  - Nitrate and nitrite
  - Turbidity

**\* Turbidity consultation:** Where PWSs have a treatment technique violation resulting from a single exceedance of the maximum allowable turbidity limit or an MCL violation resulting from an exceedance of the two-day turbidity limit, they must consult the Drinking Water Program within 24 hours. The Drinking Water Program will then determine whether a Tier 1 notice is necessary. If consultation does not occur within 24 hours, violations are automatically elevated to Tier 1.

### **Tier 3 (Annual Notice)**

**Notice must be issued as soon as practical but must be within 12 months via mail, direct home delivery, hand delivery or posting at conspicuous locations throughout system.** Notice must be repeated annually for unresolved violations. Notices for individual violations can be combined into one annual notice as long as all public notification requirements are met. All PWSs must use additional delivery methods reasonably calculated to reach other consumers not notified by the first method. The following are Tier 3 violations-

- Monitoring or testing procedure violations (unless the Drinking Water Program elevates to Tier 2)
- Special public notices such as fluoride secondary maximum contaminant level exceedance or availability of unregulated contaminant monitoring results

### **Consultation with DENR for Tier 1 Violations and Any Daily Turbidity Violation**

If you incur a Tier 1 Violation, you must consult with the DENR within 24 hours of learning of the violation. DENR may require additional PN requirements to better serve to customers of your system.

Surface water systems must also consult DENR for any daily turbidity violation. This includes systems serving less than 10,000 people that exceed 5.0 NTU for a daily turbidity level and systems serving more than 10,000 people that exceed 1.0 NTU. If you do not consult with DENR within 24 hours for these daily turbidity violations, you must proceed under the Tier 1 PN requirements within the next 24 hours. Phone numbers to consult with DENR are 605-773-3754 Monday-Friday 8:00 am-5:00 pm Central Time. All other times you may call 605-280-6831. You must indicate that you have a drinking water problem and that you must speak to a member of DENR. They will relay your call to a staff person who will return your call.

### **Requirements for Ongoing Violations**

All new customers must be notified of ongoing violations or situations requiring notice.

### **Reporting and Record Keeping**

- PWSs have ten days after issuance to send a “Certification of Distribution” and a copy of the completed notice to the Drinking Water Program
- PWS and the Drinking Water Program must keep notices on file for three years

### **For More Information**

Drinking Water Program  
Joe Foss Building - Lower Level  
523 East Capitol Ave  
Pierre SD 57501-3181  
Phone: 605-773-3754

## General Content of Public Notices

Unless otherwise specified in the regulations, each notice must contain:\*

- 1) A description of the violation or situation, including contaminant levels if applicable
- 2) When the violation or situation occurred
- 3) Any potential adverse health effects-Standard health effects language must be used
- 4) The population at risk
- 5) Whether alternative water supplies should be used
- 6) What actions consumers should take
- 7) What the system is doing to correct the violation or situation
- 8) When the water system expects to return to compliance or resolve the situation
- 9) The name, business address, and phone number of the water system owner or operator
- 10) A statement (see below) encouraging distribution of the notice to others, where applicable

*\* These elements do not apply to notices for fluoride SMCL exceedances or availability of unregulated contaminant monitoring data. Content requirements for these notices are specified in the rule.*

### **Standard Language:**

*For all failure to monitor violations:* We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During [period] we [did not monitor or test/did not complete all monitoring or testing] for [contaminant(s)] and therefore cannot be sure of the quality of the drinking water during that time.

*Standard Distribution Language for all violations:* Please share this information with all the people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

## Sample Public Notices

### Example No. 1

#### Bacteriological Monitoring Requirements not met for 1

1 water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we did to correct this situation. There is nothing you need to do at this time.

1 water system is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During 2, we submitted 3.

The State of South Dakota and the US Environmental Protection Agency (EPA) set drinking water standards and have determined that the presence of total coliforms is a possible health concern. Total coliforms are common in the environment and are generally not harmful themselves. Coliforms are used as an indicator that other, potentially harmful, bacteria MAY be present.

1 is taking the following actions to correct this problem. 4.

Please share this information with all the people who drink this water. You can do this by posting this notice in public places and where there is access to the water or by distributing copies by hand or mail (if appropriate).

For additional information, please contact 5.

- 
1. Insert name of your water system.
  2. Insert month and year your system failed to monitor.
  3. There are several types of failure to monitor violations and you must choose the correct wording for this violation. The first paragraph of the accompanying violation letter outlines exactly what type of violation occurred. Choose the correct wording below and insert it in your public notice.
    - no routine bacteriological samples.
    - some, but not all, routine bacteriological samples.
    - no repeat bacteriological samples.
    - some, but not all, repeat bacteriological samples.
  4. Some possible corrective actions you may be taking are listed below. Include only those you will be utilizing.
    - We have taken additional measures within the water system administration to be sure that samples are taken properly in the future.
    - The proper number of samples was taken during the following month and we are now back in compliance with the sampling regulations.
  5. Insert the name, address, and telephone number of a contact person representing your water system.

## Example No. 2

Tests show presence of total coliform bacteria in 1 water

We routinely monitor for the presence of drinking water contaminants. We took 2 samples during 3. 4 of those samples showed the presence of total coliform bacteria. The standard says no more than one sample per month may be total coliform present so therefore, 1 has exceeded the total coliform standard during 3.

The State of South Dakota and the United States Environmental Protection Agency (EPA) set drinking water standards and have determined that the presence of total coliforms is a possible health concern. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria MAY be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

Total coliform bacteria are generally not harmful themselves. You may drink the water. However, if you have specific health concerns, consult your doctor. People with severely compromised immune systems, infants, and some elderly maybe at increased risk. These people should seek advice about drinking water from their health care providers.

1 is taking the following actions to correct this problem. 5.

Please share this information with all the people who drink this water. You can do this by posting this notice in public places and where there is access to the water or by distributing copies by hand or mail (if appropriate).

For additional information, please contact 6.

- 
1. Insert name of your water system.
  2. Insert total number of samples collected during month of exceedance.
  3. Insert the month and year of the exceedance.
  4. Insert the number of unsafe total coliform samples.
  5. Possible corrective actions you may take include-
    - Installation of a continuous chlorinator
    - Shock chlorinating the water system
    - Increasing the coliform sampling
    - Investigating the source of the contamination
    - Flushing of main lines
    - Increase chlorine levels
  6. Insert the name, address, and telephone number of a contact person representing your public water system.

### Example No. 3

Fecal Coliform Standard Exceeded at 1

#### **BOIL YOUR WATER BEFORE USING**

1 has exceeded the fecal coliform/*E. coli* standard during the month of 2. These bacteria can make you sick, and are a particular concern for people with weakened immune systems.

The State of South Dakota and the United States Environmental Protection Agency (EPA) set drinking water standards and have determined that the presence of fecal coliforms or *E. coli* is a serious health concern. Fecal coliforms and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

The symptoms above are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice. People at increased risk should seek advice about drinking water from their health care providers.

**DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation **until further notice**. Boiling kills bacteria and other organisms in the water.

1 is taking the following actions to correct this problem. 3.

Please share this information with all the people who drink this water. You can do this by posting this notice in public places and where there is access to the water or by distributing copies by hand or mail (if appropriate).

For additional information, please contact 4.

- 
1. Insert name of water system.
  2. Insert the month and year your system exceeded the fecal coliform standard.
  3. Possible corrective actions you may take include-
    - Installation of a continuous chlorinator
    - Batch chlorinating the water system
    - Increasing the coliform sampling
    - Investigating the source of the contamination
    - Increase chlorine levels
    - Flushing of main lines
  4. Insert the name, address, and telephone number of a contact person representing your public water system.



## Example No. 4

### Nitrate Maximum Contaminant Level Exceeded

The nitrate level in the 1 water supply was found to be 2 milligrams per liter mg/L when tested. This notice is to inform the public that the 1 drinking water nitrate level is in excess of the maximum contaminant level (MCL) for nitrate, which is 10 mg/L. The routine and confirmation samples were analyzed on 3 and 3.

The State of South Dakota and the United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that nitrate poses an acute health concern at certain levels of exposure. Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome. Blue baby syndrome is indicated by blueness of the skin. Symptoms in infants can develop rapidly, with health deteriorating over a period of days. If symptoms occur, seek medical attention immediately.

**Do not boil the water.** Boiling, freezing, filtering, or letting water stand does not reduce the nitrate level. Excessive boiling can make the nitrates more concentrated because nitrates remain behind when the water evaporates. Adults and children older than six months can drink the tap water (nitrate is a concern for infants because they cannot process nitrates in the same way adults can). However, if you are pregnant or have specific health concerns, you may wish to consult your doctor. Water, juice, and formula for children less than six months of age should not be prepared with tap water. Bottled water or other water low in nitrates should be used for infants.

*Please share this information with all the people who drink this water. You can do this by posting this notice in public places and where there is access to the water or by distributing copies by hand or mail (if appropriate).*

For additional information, please contact 4.

- 
1. Insert name of your water system.
  2. Insert the level of nitrate in the water supply.
  3. Insert the date the analysis was performed.
  4. Insert the name, address, and telephone number of a contact person representing your public water system.

## Example No. 5

### 1 Exceeds Water Turbidity Limits

1 has exceeded the turbidity requirements of the Surface Water Treatment Rule (SWTR) during 2. Turbidity is a measure of suspended matter in water. The SWTR allows 5% of all turbidity readings for a month to exceed the turbidity limit while 1 had 3 % of the readings exceed during 2. The turbidity levels are relatively low; however, their persistence is of concern.

The United States Environmental Protection Agency (EPA) and the State of South Dakota have set enforceable requirements for treating drinking water to reduce the risk of adverse health effects. Treatment such as filtering and disinfecting the water removes or destroys microbiological contaminants. We routinely monitor your water for turbidity (cloudiness). This tells us whether we are effectively filtering the water supply.

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

**You do not need to boil your water or take other actions.** We do not know of any contamination, and none of our testing has shown disease-causing organisms in the drinking water. People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers.

A problem has occurred with the treatment system at the water plant. 1 is taking the following actions to correct this problem. 4.

Please share this information with all the people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

For additional information, please contact 5.

- 
1. Insert your system's name.
  2. Insert the month turbidity requirements were exceeded.
  3. Insert the percent of turbidity readings exceeded.
  4. Possible corrective actions you may take include-
    - Made chemical adjustment to reduce turbidity levels.
    - Adjusted chlorine levels to compensate for filtration problems.
    - Called in consultants for technical assistance on the filtration problems.
  5. Insert the name, address, and telephone number of a contact person representing your public water system.

South Dakota Department of Environment and Natural Resources  
Drinking Water Program  
523 E. Capitol Ave., Foss Bldg.  
Pierre, South Dakota 57501-3181

RECOMMENDED PROCEDURE FOR CHLORINE DISINFECTION OF SPRING BOX,  
ELEVATED STORAGE, GROUND RESERVOIR, CISTERN, WATER TREATMENT PLAN BASIN

Introduction

A ground reservoir, elevated tank, spring box, cistern, or water treatment plant basin should be thoroughly cleaned and then disinfected with a strong chlorine solution after:

1. ORIGINAL CONSTRUCTION
2. ANY REPAIR OR MAINTENANCE
3. FLOODING
4. A PERIOD OF NON-USE
5. TWO OR MORE "UNSAFE" BACTERIOLOGICAL WATER SAMPLES ARE TRACED TO THE WELL

Adequate chlorine requires a certain chlorine dosage for a minimum contact time - 100 parts per million for 2 hours, or 50 parts per million for 8 hours, or 25 parts per million for 24 hours.

Chlorine for disinfection for these water systems can be either 5.25% sodium hypochlorite solution or 65% calcium hypochlorite powder. A 5.25% hypochlorite solution is common house-hold bleach such "Hilex", "Clorox", or "Purex" available at grocery stores and supermarkets. The 65% calcium hypochlorite powder is available from chemical supply houses and is known commercially as "HTH", "Perchloron", or "Pittchlor".

Recommended Procedures

1. The unit to be disinfected should be full of water.
2. Determine recommended chlorine disinfection dosage for the desired contact time from the following table:

AMOUNT OF CHLORINE NECESSARY FOR DOSAGE AND TIME COMBINATIONS													
Volume of Box, Basin, Reservoir or Cistern		5.25% Sodium Hypochlorite (Bleach)						65% Calcium Hypochlorite					
		100 ppm* for 2 hrs		50 ppm* for 8 hrs		25 ppm* for 24 hrs		100 ppm* for 2 hrs		50 ppm* for 8 hrs		25 ppm* for 24 hrs	
50	gal	1½	cups	¾	cup	¾	cup	---	--	---	--	---	--
100	gal	3	cups	1½	cups	¾	cup	---	--	---	--	---	--
200	gal	6	cups	3	cups	1½	cups	---	--	---	--	---	--
500	gal	1	gal	7½	cups	3 ¾	cups	9½	oz	---	--	---	--
1,000	gal	2	gals	1	gal	7½	cups	1 lb 3 oz	oz	9½	oz	---	--
2,000	gal	4	gals	2	gals	1	gal	2 lb 6 oz	lbs	1 lb 3 oz	oz	9½	oz
5,000	gal	--	--	5	gals	2½	gals	6	lbs	3	lbs	1 lb 8 oz	oz
10,000	gal	--	--	---	--	5	gals	12	lbs	6	lbs	3	lbs
20,000	gal	--	--	---	--	---	--	24	lbs	12	lbs	6	lbs
50,000	gal	--	--	---	--	---	--	60	lbs	30	lbs	15	lbs
100,000	gal	--	--	---	--	---	--	120	lbs	60	lbs	30	lbs

\* ppm = parts per million

3. Completely mix the chlorine dosage throughout the unit to be disinfected.
4. Leave the chlorine solution in the unit for the recommended contact time.
5. Do not use the heavily chlorinated water.
6. At the end of the contact time, remove the water from the unit and discharge to waste.  
DO NOT ALLOW THE WATER TO ENTER A RIVER, LAKE, OR STREAM.
7. Fill the unit with clean water and collect a water sample for bacteriological testing after one or two days of use.

## RECOMMENDED PROCEDURE FOR CHLORINE DISINFECTION OF WATER WELLS

(Reference - AWWA A100-6, Standard for Deep Wells)

### Introduction

A water well should be thoroughly cleaned and disinfected with a strong chlorine solution after:

1. ORIGINAL CONSTRUCTION
2. ANY REPAIR OR MAINTENANCE
3. FLOODING
4. A PERIOD OF NON-USE
5. TWO OR MORE "UNSAFE" BACTERIOLOGICAL WATER SAMPLES ARE TRACED TO THE WELL

Adequate chlorine requires a certain chlorine dosage for a minimum contact time - 100 parts per million for 2 hours, or 50 parts per million for 8 hours, or 25 parts per million for 24 hours.

Chlorine for disinfection for these water systems can be either 5.25% sodium hypochlorite solution or 65% calcium hypochlorite powder. A 5.25% hypochlorite solution is common house-hold bleach such "Hilex", "Clorox", or "Purex" available at grocery stores and supermarkets. The 65% calcium hypochlorite powder is available from chemical supply houses and is known commercially as "HTH", "Perchloron", or "Pittchlor".

### Recommended Procedures

1. Determine the chlorine dosage for the desired contact time from the following table:

AMOUNT OF CHLORINE NECESSARY PER 10 FEET OF WATER IN WELL													
Inside diameter of well casing		5.25% Sodium Hypochlorite (Bleach)						65% Calcium Hypochlorite					
		100 ppm* for 2 hrs		50 ppm* for 8 hrs		25 ppm* for 24 hrs		100 ppm* for 2 hrs		50 ppm* for 8 hrs		25 ppm* for 24 hours	
1 1/4	inches	1/8	fl oz	---	--	---	--	---	--	---	--	---	--
2	inches	1/2	fl oz	1/4	fl oz	1/8	fl oz	---	--	---	--	---	--
3	inches	1	fl oz	1/2	fl oz	1/4	fl oz	---	--	---	--	---	--
4	inches	1 1/2	fl oz	3/4	fl oz	3/8	fl oz	---	--	---	--	---	--
6	inches	4	fl oz	2	fl oz	1	fl oz	1/4	oz	1/8	oz	1/16	oz
8	inches	7	fl oz	3 1/2	fl oz	1 3/4	fl oz	1/2	oz	1/4	oz	1/8	oz
10	inches	10	fl oz	5	fl oz	2	fl oz	3/4	oz	3/8	oz	3/16	oz
12	inches	2	cups	1	cup	1/2	cup	1	oz	1/2	oz	1/4	oz
18	inches	4 1/2	cups	2 1/4	cups	1 1/8	cups	2 1/2	oz	1 1/4	oz	5/7	oz
24	inches	7 1/2	cups	3 3/4	cups	1 7/8	cups	4 1/2	oz	2 1/4	oz	1 1/8	oz
36	inches	17 1/2	cups	8 3/4	cups	4 3/8	cups	10	oz	5	oz	2 1/2	oz

\* ppm = parts per million 1 heaping tablespoon of 65% chlorine powder = 1/2 oz. 8 fluid ounces = 1 cup

2. Prepare a chlorine solution, lift well pump, and pour the chlorine solution into the well.
3. Lower the pump and operate until a chlorine odor is noticed at all discharge points.
4. Leave the chlorine solution in the unit for the recommended contact time. Do not use the water.
5. At the end of the contact time, pump the well to waste until the chlorine odor cannot be detected.  
DO NOT ALLOW THE WATER TO ENTER A RIVER, LAKE, OR STREAM.
6. Pump the well for considerable period of time and collect a bacteriological water sample and submit it for testing.

### Certificate of Public Notice Distribution

Public water systems must submit a copy of this certificate as well as a copy of each public notice with ten days of issuance.

PWS Name- \_\_\_\_\_

PWS ID#- \_\_\_\_\_

Violation- \_\_\_\_\_

Occurring on- \_\_\_\_\_

I affirm that the attached public notice has been provided to consumers in accordance with the Public Notice Regulations. The public notice was distributed by the following method(s)-[Please check as appropriate]

- ☐ TV Station \_\_\_\_\_
- ☐ Radio Station \_\_\_\_\_
- ☐ Direct Home Delivery
- ☐ Posting at Numerous Locations Throughout System-Please indicate number of postings \_\_\_\_\_
- ☐ Other-Please indicate method \_\_\_\_\_

Date of Notice Distribution/Issuance \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date